



DAMES & MOORE

A PROFESSIONAL LIMITED PARTNERSHIP

500 MARKET PLACE TOWER, 2025 FIRST AVENUE, SEATTLE, WASHINGTON 98121
(206) 728-0744

SCANNED

June 1, 1990

Alaska Marine Lines
18000 Pacific Highway South #800
Seattle WA 98188

Att: Mr. Bob Strong

Soil Vapor Survey
7100 2nd Ave SW
Seattle, Washington

Dear Bob:

As you have requested, Dames & Moore will conduct a soil vapor survey at the site located at 7100 2nd Avenue SW, Seattle, Washington. The purpose of the survey is to assess the potential presence of petroleum products in soil which may be associated with existing and former underground storage tanks at the site. Based on the results of this survey, we will provide our opinions concerning future tank excavations and/or remedial alternatives.

A soil vapor survey is a screening technique to evaluate the presence of organic vapors within the soil. The vapors are collected with a vacuum pump and then analyzed with one or more field screening devices. For this survey, we will use an organic vapor analyzer (OVA) in conjunction with an organic vapor monitor (OVM). The use of both instruments may enable us to differentiate between diesel and gasoline-related vapors.

The approach we will take for this project consists of the following steps:

1. A grid will be surveyed near the existing and former tank locations with 20 foot centers.
2. Soil vapor readings will be obtained on four sides of the tank locations. If anomalous readings are obtained at any of the locations, readings will be collected



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from the next set of grid points. The survey will continue until background readings are obtained. Based on the results of the OVA/OVM readings, field personnel will elect to expand or reduce the grid spacing.

3. A report will be prepared to document our findings, provide interpretations concerning the potential lateral extent of soil contamination, and make recommendations concerning procedures for the future tank excavations and/or remedial alternatives.

The estimated cost for this task will depend to a large extent on the conditions encountered in the field. We estimate that the work will require between one and two field days and that between 20 and 40 grid points will be surveyed. The estimated cost for this work is approximately \$6,000. Table 1 provides a more detailed explanation for these estimated costs.

As you requested, we have tentatively scheduled our field activities during a weekend, June 9 and 10. We will confirm these dates with you next week.

This work will be conducted in accordance with the terms and conditions of the Service Agreement between Alaska Marine Lines and Dames & Moore dated June 1, 1990. If you have any questions or comments concerning our approach or proposed activities, please call us.

Sincerely,

DAMES & MOORE

Susan C. Kent
Project Manager

To: Bobbie Strong (BOBBIE)
Subject: UST REMOVAL

10:49:02 30 MAY 1990
P9955/127155 Page 1

Number: P9955/127155
Message date: 30 MAY 1990 10:32AM
Sender: Bobbie Strong (BOBBIE)
From: BOBBIE
To: TROY
Subject: UST REMOVAL
cc: BOBBIE CHOLM DICKK

I MET WITH SUE KENT & JIM FLEETWOOD FROM DAMES & MOORE AND BOB SHAFFER FROM B & C EQUIPMENT THIS A.M. TO ASSIGN RESPONSIBILITIES AND FINALIZE CONTRACTUAL TERMS.

DAMES & MOORE WILL BE HANDLING THE SOIL TESTING AND DELINEATION OF CONTAMINATION (IF ANY) AND WILL MAKE RECOMMENDATIONS FOR REMEDIATION (IF NECESSARY). THEIR RECOMMENDATION IS THAT PRIOR TO COMMENCEMENT OF EXCAVATION TO CONDUCT A VAPOR SURVEY ON THE 1ST AVE. PROPERTY TO GET SOME IDEA OF THE EXTENT AND CONCENTRATION OF CONTAMINATION, IF IT EXISTS. THERE IS REASON TO BELIEVE THAT THERE IS SOME CONTAMINATION BECAUSE THE TANKS FAILED A RECENT TIGHTNESS TEST AND WHEN MILLER REMOVED A GASOLINE TANK USED BY THE BUS COMPANY SEVERAL YEARS AGO, THAT TANK WAS FOUND TO BE SPLIT WIDE OPEN WITH GROSS CONTAMINATION PRESENT IN THE EXCAVATION. ONCE THE EXTENT AND CONCENTRATION IS DETERMINED (OR REPUDIATED) THEN EXCAVATION CAN BE SCHEDULED. THE VAPOR SURVEY WILL TENTATIVELY BE SCHEDULED FOR NEXT WEEK TO BE COORDINATED SO AS NOT TO INTERFERE WITH AML OPERATIONS. DAMES & MOORE WILL HAVE A CONTRACT TO BE SIGNED BY AML FOR THE 1ST AVE. ACTIVITY AND THEIR CHARGES WILL BE TIME & MATERIALS ACCORDING TO A RATE SHEET PROVIDED.

ONCE THE VAPOR SURVEY IS CONDUCTED, A DETERMINATION WILL BE MADE AS TO WHEN TO BRING IN B & C WHO CAN BE SCHEDULED ANYTIME AFTER JUNE 10, AT THIS POINT. THIS SCHEDULE WILL BE COORDINATED WITH AML AND WITH PAT HAUGEN. B & C'S CHARGES WILL BE TIME & MATERIALS ACCORDING TO A RATE SCHEDULE ALREADY PROVIDED TO AML.

I WILL TRY TO REMAIN INVOLVED IN EVERY STEP BUT AML SHOULD HAVE SOMEBODY DESIGNATED AS THEIR REPRESENTATIVE TO BE ON LOCATION WHEN ANY WORK IS BEING PERFORMED TO PROVIDE INPUT AND MONITOR ALL ASPECTS OF THE REMOVAL OPERATION.

ACCORDING TO CHRISTEL, 1ST AVE. REMOVAL WILL BE BILLED TO AML AND WEST MARGINAL WILL BE BILLED TO DOUGLAS, ALTHOUGH ALL ACTIVITIES AT WEST MARGINAL WILL BE COORDINATED THROUGH AML AND CONTRACTORS WILL BE MONITORED BY AML.

BIOREMEDIATION APPEARS TO BE THE MOST ECONOMICAL METHOD FOR REMEDIATING SUSPECTED SOIL CONTAMINATION AND WILL REQUIRE SOME AREA FOR FARMING THE SOIL WHICH WILL PROBABLY BE AVAILABLE AT THE W/S PROPERTY ON WEST MARGINAL DEPENDING ON THE AMOUNT OF CONTAMINATED SOIL.

AML HAS WORKED WITH B & C CONTRACTORS IN THE PAST AND CHRISTEL AND MYSELF HAVE HAD DEALINGS WITH SUE KENT (ALBEIT SHE WAS EMPLOYED BY A DIFFERENT COMPANY) AND WE (COLLECTIVELY) HAVE HAD GOOD RESULTS AND FEEL THAT WE HAVE BEEN TREATED FAIRLY HENCE THE TIME AND MATERIALS CONTRACTS THIS GO AROUND TO ELIMINATE THE BIG CONTINGENCIES THAT WOULD BE BUILT INTO HARD DOLLAR CONTRACTS FOR THIS TYPE OF WORK. IT ALSO MEANS THAT THE AML MONITOR (AND MYSELF) SHOULD NOT BE NERVOUS ABOUT QUESTIONING MANPOWER AND EQUIPMENT RECOMMENDATIONS BY EITHER CONTRACTOR.

To: Bobbie Strong (BOBBIE)
Subject: CONTRACTOR MEETING

08:55:47 29 MAY 1990
P9955/126992 Page 1

Number: P9955/126992
Message date: 29 MAY 1990 08:51AM
Sender: Bobbie Strong (BOBBIE)
From: BOBBIE
To: LAEL
Subject: CONTRACTOR MEETING
cc: BOBBIE TROY DICKK

SUE KENT FROM DAMES & MOORE, STEVE COUGLIN FROM B & C EQUIPMENT AND MYSELF WILL BE HAVING A MEETING AT LIGO 5-30-90 @ 0900 TO DETERMINE RESPONSIBILITIES AND FINALIZE CONTRACTS FOR THE TANK REMOVAL AT AML. PAYMENT SCHEME AND COORDINATION OF EFFORTS WILL BE MAIN TOPIC OF CONVERSATION; IF YOU CANNOT ATTEND WOULD YOU SEND SOMEONE IN YOUR STEAD WHO CAN MAKE COMMITMENTS FOR AML? THANKS!

== End of Message ==

To: Bobbie Strong (BOBBIE)
Subject: FUEL STORAGE TANKS

11:29:37 22 MAY 1990
P9955/126501 Page 1

Number: P9955/126501
Message date: 22 MAY 1990 11:27AM
Sender: Bobbie Strong (BOBBIE)
From: BOBBIE
To: TROY
Subject: FUEL STORAGE TANKS
cc: BOBBIE DICKK

I AM COORDINATING THE REMOVAL OF THE YOUR LOCAL UST'S WITH LAEL AND THE CONTRACTOR. LAEL AND I WILL MEET WITH THE CONTRACTOR EARLY NEXT WEEK TO FINALIZE THE CONTRACT. THE REMOVAL PERMIT HAS BEEN APPLIED FOR AND SHOULD BE AVAILABLE APPROX JUNE 4.

I WAS CHAGRINED TO LEARN JUST THIS MORNING FROM LAEL THAT AML IS RESPONSIBLE FOR A UST IN JUNEAU AND ANOTHER IN KETCHIKAN. AS MANY TIMES AS I HAVE REQUESTED INFORMATION ON UST INVENTORY FOR EACH OF THE SUBSIDIARIES SINCE LATE IN 1988 AND TO FIND OUT TODAY THE EXISTENCE OF THESE ADDITIONAL TANKS MAKES ME LOOK RATHER INCOMPETENT WHICH I CAN ACCOMPLISH EASILY ENOUGH WITHOUT ANY ASSISTANCE. I WILL MONITOR THIS SITUATION WITH LAEL. THERE IS A BILL IN THE ALASKA LEGISLATURE WHICH WOULD PROVIDE FUNDING FOR PRIVATE COMPANIES TO REMOVE AND REMEDIATE UST'S.

== End of Message ==